AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for modeling different functional areas of a brain within a second head to focus magnetic stimulation and/or visualize the results of magnetic stimulation techniques, magnetoenecephalography (MEG) or electroencephalography (EEG),(EEG), the method comprising:

    a)   determining the location of at least one functional area of a brain within a first head in three-dimensional space,

    b)   determining the external dimensions of the second head , and

    c)   scaling location data of said at least one functional area of said first head in threein three-dimensional space to correlate with said external dimensions of said second head ,head, thereby defining the locations of the at least one functional area in said second head such that the location data of the functional areas of the brain of said second head arehead are modeled without anatomical images of the internal structures of said second head .head.

2. (Previously Presented) The method of claim 1, further comprising focusing magnetic stimulation and/or visualization of results obtained by magnetic stimulation, MEG or EEG based on results of said scaling location data.

3. (Previously Presented) The method of claim 1, wherein said location data is displayed in an image format and the scaling thereof in step c) is implemented by mutual moving of individual pixels.

4. (Currently Amended) The method of claim 1, wherein a response recorded by MEG or EEG or, alternatively, an effective stimulating field of trans-cranial magnetic stimulation (TMS) is localized in relation to anatomical marker points determined on the second head surface.

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5. (Previously Presented) The method of claim 1, wherein said step b) of determining the external head dimensions is performed by using infrared light, electromagnetic fields, laser light or a pointer equipped with electrical position sensor means.

6. (Previously Presented) The method of claim 1, wherein said step a) of determining uses internal structures of a plurality of heads of persons of substantially the same age;

said step c) of scaling uses an image scaling algorithm and includes adjusting the distance from the cortex to the scalp to a value typical for the persons of substantially the same age.

7. (Previously Presented) The method of claim 1, wherein the step c) of scaling performs a deformation operation utilizing location data of such functional points of the brain that are localized solely with the help of magnetic stimulation, MEG or EEG as functional points of the brain.

8. (Previously Presented) The method of claim 1, wherein said step of scaling performs image deformation using a minimizing algorithm that minimizes the mutual distances between the respective points of the deformed image of the second head and the points measured on the surface of a first head .

9. (Previously Presented) The method of claim 8, wherein the computation results of the minimization algorithm are accepted even when the mutual distances between respective image points are not reduced to zero.

10. (Previously Presented) The method of claim 1, further comprising generating visual results of TMS, EEG or MEG examinations performed on a patient having no magnetic resonance images of his/her head available.

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11. (Previously Presented) The method of claim 1, further comprising displaying results in a single set of MR images obtained from measurements performed on a plurality of test persons.

12. (Previously Presented) The method of claim 1, further comprising selecting, as a first head, a head from a library of plural magnetic resonance images taken from a plurality of persons representing heads of different types and shapes.

13. (Previously Presented) The method of claim 1, wherein scaling comprises linear scaling.

14. (Previously Presented) The method of claim 1, wherein scaling comprises nonlinear scaling.

15. (Previously Presented) The method of claim 1, wherein the method further comprises d) obtaining a three-dimensional image from magnetic resonance imaging or computer-aided tomography of the first head.

16. (Previously Presented) The method of claim 1 wherein the step b) only determines the external dimensions of the second head without directly determining the location of internal structures of the second head in three dimensional space.

17. (Previously Presented) The method of claim 16 wherein the step b) is performed without acquiring or generating any information regarding the location of internal structures of the second head.

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